OPERACIONES CON FRACCIONES

1.- Opera y simplifica al máximo:

$a)\ \frac{5}{4}\cdot\left(6-\frac{1}{2}\right)\cdot\frac{3}{2}-1=$

$b)\ \left(-\frac{4}{5}\right)\cdot\frac{10}{3}-7\cdot\frac{1}{2}=$

$c)\ -1-\left(4-\frac{3}{5}-\frac{1}{5}\cdot\frac{3}{2}\right)=$

2.- Calcula y simplifica:

$a)\ \frac{1}{5}\cdot\frac{11}{72}-\frac{7}{72}+\frac{5}{24}-\frac{1}{15}=$

$b)\ \left[-\frac{4}{5}\left(-\frac{6}{2}\right)-4\right]\cdot\left(-\frac{3}{2}\right)=$

$c)\ \frac{43}{15}-\frac{7}{60}\left(4-\frac{1}{7}\right)=$

3.- Opera y simplifica al máximo:

$a)\ \frac{3}{2}+\frac{1}{3}:\left(\frac{3-8}{12}\right)=$

$b)\ \left(\frac{1}{5}\cdot\frac{3}{2}\right)\cdot\left(\frac{2}{3}-\frac{1}{2}\right)=$

$c)\ \frac{3}{4}:\frac{5}{10}+2-\frac{3}{2}=$

SOLUCIONES

1.-

$$a)\ \frac{5}{4}\cdot\left(6-\frac{1}{2}\right)\cdot\frac{3}{2}-1=\frac{5}{4}\cdot\left(\frac{12-1}{2}\right)\cdot\frac{3}{2}-1=\frac{5}{4}\cdot\frac{11}{2}\cdot\frac{3}{2}-1=\frac{165}{16}-1=\frac{165-16}{16}=\boxed{\frac{149}{16}}$$

$$b)\ \left(-\frac{4}{5}\right)\cdot\frac{10}{3}-7\cdot\frac{1}{2}=-\frac{40}{15}-\frac{7}{2}=\frac{-80-105}{30}=-\frac{185}{30}=\boxed{-\frac{37}{6}}$$

$$c)\ -1-\left(4-\frac{3}{5}-\frac{1}{5}\cdot\frac{3}{2}\right)=-1-\left(4-\frac{3}{5}-\frac{3}{10}\right)=-1-\left(\frac{40}{10}-\frac{6}{10}-\frac{3}{10}\right)=-1-\frac{31}{10}=-\frac{10}{10}-\frac{31}{10}=\boxed{-\frac{41}{10}}$$

2.-

$$a)\ \frac{1}{5}\cdot\frac{11}{72}-\frac{7}{72}+\frac{5}{24}-\frac{1}{15}=\frac{11}{360}-\frac{7}{72}+\frac{5}{24}-\frac{1}{15}=\frac{11}{360}-\frac{35}{360}+\frac{75}{360}-\frac{24}{360}=\frac{27}{360}=\boxed{\frac{3}{40}}$$

$$b)\ \left[-\frac{4}{5}\left(-\frac{6}{2}\right)-4\right]\cdot\left(-\frac{3}{2}\right)=\left(\frac{24}{10}-4\right)\cdot\left(-\frac{3}{2}\right)=\left(\frac{24-40}{10}\right)\cdot\left(-\frac{3}{2}\right)=-\frac{16}{10}\cdot\left(-\frac{3}{2}\right)=\frac{48}{20}=\boxed{\frac{12}{5}}$$

$$c)\ \frac{43}{15}-\frac{7}{60}\left(4-\frac{1}{7}\right)=\frac{43}{15}-\frac{7}{60}\left(\frac{28}{7}-\frac{1}{7}\right)=\frac{43}{15}-\frac{7}{60}\cdot\frac{27}{7}=\frac{43}{15}-\frac{189}{420}=\frac{1024-189}{420}=\frac{1015}{420}=\boxed{\frac{29}{12}}$$

3.-

$$a)\ \frac{3}{2}+\frac{1}{3}:\left(\frac{3-8}{12}\right)=\frac{3}{2}+\frac{1}{3}:\left(\frac{-5}{12}\right)=\frac{3}{2}-\frac{12}{15}=\frac{45}{30}-\frac{24}{30}=\frac{21}{30}=\boxed{\frac{7}{10}}$$

$$b)\ \left(\frac{1}{5}\cdot\frac{3}{2}\right)\cdot\left(\frac{2}{3}-\frac{1}{2}\right)=\frac{3}{10}\cdot\left(\frac{4-3}{6}\right)=\frac{3}{10}\cdot\frac{1}{6}=\frac{3}{60}=\boxed{\frac{1}{20}}$$

$$c)\ \frac{3}{4}:\frac{5}{10}+2-\frac{3}{2}=\frac{30}{20}+2-\frac{3}{2}=\frac{30}{20}+\frac{40}{20}-\frac{30}{20}=\frac{40}{20}=\boxed{2}$$